(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 22 January 2004 (22.01.2004)

PCT

(10) International Publication Number **WO 2004/008446 A2**

(51) International Patent Classification7:

G11B 7/24

(21) International Application Number:

PCT/DK2003/000488

(22) International Filing Date:

11 July 2003 (11.07.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

PA 2002 01090 60/394,875

11 July 2002 (11.07.2002)

US (84) 11 July 2002 (11.07.2002) DK 🗸

PA 2003 00765

20 May 2003 (20.05.2003)

(71) Applicant (for all designated States except US): GLUD & MARSTRAND A/S [DK/DK]; Hedensiedvej 14, DK-8723 Løsning (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LINDVOLD, Lars [DK/DK]; Kornager 210, DK-2980 Kokkedal (DK). TIDE-MANN, Jesper [DK/DK]; Merkurvej 42, DK-8723 Løsning (DK).

(74) Agent: PLOUGMANN & VINGTOFT A/S; Sundkrogsgade 9, P.O. Box 831, DK-2100 Copenhagen Ø (DK).

(81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH. CN. CO. CR. CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS PKE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO. RU, SC, SD, SE, SG, SK (utility model), SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW. Of adility worder

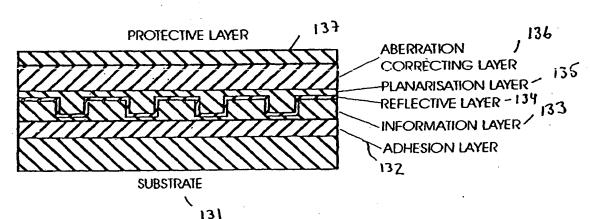
Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A COMPENSATED OPTICAL STORAGE MEDIUM



(57) Abstract: A optical storage medium is provided, comprising a main substrate, an information surface being associated with the main substrate, and at least one compensating layer. The compensating layer may change a phase and/or amplitude of a propagating electromagnetic wavefront according to a first optical transfer function so that the optical storage medium may be read or recorded by a detector/emitter being pre-set to read or record information at an information surface through a medium changing the phase and/or amplitude of a propagating wavefront according to a predetermined optical transfer function being different from the first optical transfer function. The compensating layer may optically reduce a spot size of a light beam incident on the information surface, and/or compensate for aberrations caused by a first distance being different from a predetermined distance. The substrate may be non-transparent and/or thinner than standard substrates. Methods of making such media are also provided.